MASSACHUSETTS

STATE NORMAL SCHOOL

AT WORCESTER.

1889.

MASSACHUSETTS

STATE NORMAL SCHOOL

AT WORCESTER.

CATALOGUE AND CIRCULAR.

FIFTEENTH YEAR, 1889.

BOSTON:
WRIGHT & POTTER PRINTING CO., STATE PRINTERS,
18 POST OFFICE SQUARE.
1889.

STATE BOARD OF EDUCATION.

ESTABLISHED IN 1837.

Ex Officio.

HIS EXCELLENCY OLIVER AMES, EASTON.

HIS HONOR JOHN Q. A. BRACKETT, ARLINGTON.

By Appointment.

		TERM EXPIRES.
MILTON B. WHITNEY,	*Westfield*,	May 25, 1889.
FRANCIS A. WALKER,	*Boston*,	May 25, 1890.
ELMER H. CAPEN,	*Medford*,	May 25, 1891.
ELIJAH B. STODDARD,	*Worcester*,	May 25, 1892.
ALONZO A. MINER,	*Boston*,	May 25, 1893.
HORACE E. SCUDDER,	*Cambridge*,	May 25, 1894.
ADMIRAL P. STONE,	*Springfield*,	May 25, 1895.
MRS. KATE GANNETT WELLS,	*Boston*,	May 25, 1896.

SECRETARY.

JOHN W. DICKINSON, ... *Newton.*

ASSISTANT SECRETARY AND TREASURER.

C. B. TILLINGHAST, ... *Boston.*

AGENTS.

GEORGE A. WALTON, ... *West Newton.*
GEORGE H. MARTIN, ... *Bridgewater.*
ANDREW W. EDSON, ... *Worcester.*
G. T. FLETCHER, ... *Northampton.*
HENRY T. BAILEY, ... *North Scituate.*

Vacations and Holidays marked by Full-face Figures.

◁1889.▷

JULY.

Su.	Mo.	Tu.	We.	Th.	Fr.	Sa.
--	**1**	**2**	**3**	**4**	**5**	**6**
7	**8**	**9**	**10**	**11**	**12**	**13**
14	**15**	**16**	**17**	**18**	**19**	**20**
21	**22**	**23**	**24**	**25**	**26**	**27**
28	**29**	**30**	**31**	--	--	--

AUGUST.

Su.	Mo.	Tu.	We.	Th.	Fr.	Sa.
--	--	--	--	**1**	**2**	**3**
4	**5**	**6**	**7**	**8**	**9**	**10**
11	**12**	**13**	**14**	**15**	**16**	**17**
18	**19**	**20**	**21**	**22**	**23**	**24**
25	**26**	**27**	**28**	**29**	**30**	**31**

SEPTEMBER.

Su.	Mo.	Tu.	We.	Th.	Fr.	Sa.
1	**2**	**3**	**4**	**5**	**6**	**7**
8	**9**	**10**	**11**	12	13	14
15	**16**	17	18	19	20	21
22	**23**	24	25	26	27	28
29	**30**	--	--	--	--	--
--	--	--	--	--	--	--

OCTOBER.

Su.	Mo.	Tu.	We.	Th.	Fr.	Sa.
--	--	1	2	3	4	5
6	**7**	8	9	10	11	12
13	**14**	15	16	17	18	19
20	**21**	22	23	24	25	26
27	**28**	29	**30**	31	--	--

NOVEMBER.

Su.	Mo.	Tu.	We.	Th.	Fr.	Sa.
--	--	--	--	--	1	2
3	**4**	5	6	7	8	9
10	**11**	12	13	14	15	16
17	**18**	19	20	21	22	23
24	**25**	**26**	**27**	**28**	**29**	**30**

DECEMBER.

Su.	Mo.	Tu.	We.	Th.	Fr.	Sa.
1	**2**	3	4	5	6	7
8	**9**	10	11	12	13	14
15	**16**	17	18	19	20	21
22	**23**	24	**25**	26	27	28
29	**30**	31	--	--	--	--

◁1890.▷

JANUARY.

Su.	Mo.	Tu.	We.	Th.	Fr.	Sa.
--	--	--	**1**	2	3	4
5	**6**	7	8	9	10	11
12	**13**	14	15	16	17	18
19	**20**	21	22	23	24	25
26	**27**	28	29	30	**31**	--

FEBRUARY.

Su.	Mo.	Tu.	We.	Th.	Fr.	Sa.
--	--	--	--	--	--	**1**
2	**3**	**4**	**5**	6	7	8
9	**10**	11	12	13	14	15
16	**17**	18	19	20	21	**22**
23	**24**	25	26	27	28	--

MARCH.

Su.	Mo.	Tu.	We.	Th.	Fr.	Sa.
--	--	--	--	--	--	1
2	**3**	4	5	6	7	8
9	**10**	11	12	13	14	15
16	**17**	18	19	20	21	22
23	**24**	25	26	27	28	29
30	**31**	--	--	--	--	--

APRIL.

Su.	Mo.	Tu.	We.	Th.	Fr.	Sa.
--	--	1	2	**3**	4	5
6	**7**	8	9	10	11	12
13	**14**	15	16	17	18	19
20	**21**	**22**	**23**	**24**	**25**	**26**
27	**28**	29	**30**	--	--	--

MAY.

Su.	Mo.	Tu.	We.	Th.	Fr.	Sa.
--	--	--	--	1	2	3
4	**5**	6	7	8	9	10
11	**12**	13	14	15	16	17
18	**19**	20	21	22	23	24
25	**26**	27	28	29	**30**	31

JUNE.

Su.	Mo.	Tu.	We.	Th.	Fr.	Sa.
1	**2**	3	4	5	6	7
8	**9**	10	11	12	13	14
15	**16**	17	18	19	20	21
22	**23**	24	25	26	**27**	**28**
29	**30**	--	--	--	--	--

THE CALENDAR.

(See opposite page.)

SIXTEENTH SCHOOL YEAR, 1889–90.

FIRST (FALL) TERM, 1889.

September 12, Thursday,	Entrance Examination begins.
October 30, Wednesday,	Autumn Arbor Day.
November 25 to December 3,	Mid-Term Recess.
December 25,	Christmas.
January 1,	New Year's Day.
January 30, 1890, Thursday,	First Term ends.

WINTER VACATION, ONE WEEK.

SECOND (SPRING) TERM, 1890.

February 6, Thursday,	Entrance Examination begins.
February 22, Saturday,	Washington's Birthday.
April 3, Thursday,	Fast Day.
April 21 to April 29,	Mid-Term Recess.
April 30, Wednesday,	Spring Arbor Day.
May 30, Friday,	Memorial Day.
June 26, Thursday,	School Year ends.

SUMMER VACATION, ELEVEN WEEKS.

Seventeenth School Year (1890-91) begins with Entrance Examination on Thursday, September 11, 1890.

SPECIAL NOTICE.

Entrance Examinations occur twice a year, at the beginning of each term,— *and at no other time.*

Exercises of Graduation occur once a year only, — namely, on the last day of the Summer Term, — and are always open to the public.

There is no session of the school on Monday. On other days the hours are from twenty-five minutes past nine o'clock to five minutes to four, with an intermission of an hour a little after noon.

Communications may be addressed to the Principal, 184 Lincoln Street, or to Hon. E. B. Stoddard, 15 Ashland Street.

TEACHERS.

E. HARLOW RUSSELL, PRINCIPAL.

MISS REBECCA JONES.

CHARLES F. ADAMS.

MISS JULIET PORTER.

HENRY W. BROWN.

MISS HELEN F. MARSH.

MISS ELLEN M. HASKELL.

MRS. MARION J. SUMNER.

MISS ARABELLA H. TUCKER.

JOHN CRON, - - - - - JANITOR.

STUDENTS.

PURSUING POST-GRADUATE STUDIES.

N. B. — Students whose names are marked with (A) have, besides passing through the regular course of study, served for a half-year as apprentices (see p. 18) in the public schools of the city of Worcester.

Sarah Maria Averill	*Plainfield, Conn.*
Harriet Almira Baker	*Phillipston.*
Alice Harriette Belding	*Worcester.*
Clara Harwood Bemis	*Spencer.*
Addie Maria Blenus	*Worcester.*
Annie Josephine Butterfield (A)	*Worcester.*
Ella Agnes Casey	*Worcester.*
Anna Teresa Cavanough (A)	*Worcester.*
Alice Chapin (A)	*Auburn.*
Jennie Cora Clough	*Worcester.*
Anna Burgess Collier (A)	*Worcester.*
Caroline Gertrude Cooke (A)	*Worcester.*
Mary Agnes Cunningham (A)	*Worcester.*
Minnie Alberta Davis	*Worcester.*
Jennie Luliona Dearborn	*Worcester.*
Sarah Elizabeth Earley (A)	*Spencer.*
Grace Rebecca Everett (A)	*Worcester.*
Mary Elizabeth Fitzgerald	*Worcester.*
Carrie Lincoln Fletcher (A)	*Worcester.*
Anna Gertrude Foley (A)	*Worcester.*
Ann Foskett (A)	*Webster.*
Adelia Teresa Gauren (A)	*Worcester.*
Eudora Estella Hay	*Worcester.*
Kate Maria Healy (A)	*Worcester.*
Marietta Knight	*Worcester.*

Mrs. Winslow S. Lincoln	*Worcester.*
Mary Emily McCormick (A)	*Worcester.*
Sarah Ann McCormick (A)	*Worcester.*
Henrietta Agnes Murray	*Worcester.*
Mary Jane Newton (A)	*Greenfield.*
Grace Lamson Newton (A)	*Oakdale.*
Catherine Theresa Nevins (A)	*Nantucket.*
Abigail Loretta O'Hara (A)	*Worcester.*
Ellen Agnes O'Neil (A)	*Worcester.*
Miriam Frances Proctor (A)	*Spencer.*
Hattie May Ruggles (A)	*Worcester.*
Julia Agnes Quinn (A)	*Worcester.*
Margaret Scott (A)	*Burlington, Vt.*
Mary Lucy Seavey (A)	*Worcester.*
Abby Brewer Shute	*Auburn.*
Anna Philena Smith	*Central Village, Conn.*
Anna Theresa Smith (A)	*Worcester.*
Kate Emogene Smith (A)	*Florence.*
Mary Celia Smith (A)	*Worcester.*
Agnes Rose Stewart (A)	*Worcester.*
Marion Capitola Tucker	*North Brookfield.*
Marina Harwood Tucker	*North Brookfield.*
Florence Sherman Waite (A)	*Worcester.*
Fanny Alberta Williams	*Worcester.*

FIRST CLASS, JANUARY, 1889.

Martha Jennie Alton (A)	*Worcester.*
Harriet Amelia Blood (A)	*Worcester.*
Carrie Maria Bunce (A)	*Worcester.*
Anna Loretta Callahan	*Barre.*
Harriet Washburn Cook (A)	*Worcester.*
Jennie Maria Fairbanks	*Holden.*
Ellen Estelle Fitzgerald (A)	*Worcester.*
Cecilia Theresa Kelley (A)	*Worcester.*
Sarah Ann McCormick (A)	*Worcester.*
Ellen Agnes McTiernan (A)	*Worcester.*
Alice Elizabeth Marsh	*Leicester.*
Katherine Mathews (A)	*Westborough.*

Grace Lamson Newton (A)	*Oakdale.*
Ellen Agnes O'Neil (A)	*Worcester.*
Mary Elizabeth Patten	*Clinton.*
Alice Cressy Plumer (A)	*Maxwell, Neb.*
Grace Emmeline Remington (A)	*Worcester.*
Sara Elizabeth Rollison (A)	*Worcester.*
Olive Russell (A)	*Worcester.*
Mary Ann Agnes Short (A)	*Worcester.*
Mary Alice Smith (A)	*Worcester.*
Dora Taft	*Mendon.*
Winifred Rosalie Todd (A)	*Worcester.*
Sidney Everett Walton	*Fitchburg.*
Died at his home in Fitchburg, March 10, 1889.	
Addy Frances Yeaton (A)	*Worcester.*

FIRST CLASS, JUNE, 1889.

Clara Elizabeth Andrews (A)	*Boylston.*
Grace Hulford Bishop (A)	*Worcester.*
Annie Jane Blanchard	*West Windham, N. H.*
Ellen Gertrude Carey (A)	*Worcester.*
Stella Elizabeth Chapin (A)	*Worcester.*
Susan May Corbin	*West Woodstock, Conn.*
Annie Maria Gilbert (A)	*Worcester.*
Nettie May Grout (A)	*Spencer.*
Susan Martha Hill (A)	*Hudson.*
Annie Lilian Proctor	*Alexandria, Neb.*
Lou Frances Sawtelle	*Worcester.*
Netty Anna Starkey (A)	*Worcester.*
Katie Stevenson (A)	*Worcester.*
Clara Harwood Walker (A)	*Worcester.*
Elizabeth Frances Walker (A)	*Worcester.*
Martha Raymond Walker (A)	*Worcester.*
Harriet Erwin Wheeler (A)	*Worcester.*
Emma Augusta Windle	*Oxford.*

APPRENTICES. (See page 18.)

Maud Sophie Bosworth	*Worcester.*
Herbert Eugene Buxton	*Ashford, Conn.*
Flora Browning Chamberlain	*Worcester.*

Belle Josephine Clarke	*Westborough.*
Florence Malbone Dodge	*Worcester.*
Alice Gertrude Draper	*Worcester.*
Honora Malony Dunleavy	*Uxbridge.*
Kathline Elizabeth Dwyer	*Worcester.*
Alice Little Eames	*Worcester.*
Elizabeth Christine Finn	*Worcester.*
Costella Gertrude Gale	*Guildford, Vt.*
Huldah Jane Gibson	*South Boston.*
Harriet Almira Greene	*Wrentham.*
Mary Catherine Henry	*Worcester.*
Anna May Hewett	*Worcester.*
Lena May Hurlbut	*Richford, Vt.*
Mary Bigelow Knowlton	*Westborough.*
Charlotte McFarland	*Worcester.*
Annie Teresa McGrath	*Worcester.*
Annie York Milliken	*Worcester.*
Anna Grace Moore	*Worcester.*
Amy Murray	*Worcester.*
Kate Evans Parker Newhall	*Worcester.*
Effie Rilla Putnam	*West Sutton.*
Mary Helen Rogers	*Holden.*
Sarah Agnes Russell	*Worcester.*
Janet Witherby Scruton	*Canton, N. Y.*
Ella Louise Smith	*Worcester.*
Edith Maria Studley	*Worcester.*
Annie Lilian Sullivan	*Worcester.*
Mary Eleanor Whitty	*Fitchburg.*

SECOND CLASS.

Ella May Adams	*Worcester.*
Amy Maria Aldrich	*Westborough.*
Emma Susie Barrett	*Worcester.*
Mattie Josephine Black	*Worcester.*
Jennie Frances Brennan	*Worcester.*
Mary Edith Cheney	*Southbridge.*
Emma Jane Cooper	*Worcester.*
Anna Gertrude Cullen	*Worcester.*

Maud Elizabeth Davis	*Holden.*
Margaret Jane Gartland (A)	*Worcester.*
Mary Gertrude Geary (A)	*Worcester.*
Alice Jane Hildreth	*Worcester.*
Emma Ada Hopwood (A)	*Worcester.*
Sarah Alice Hopwood	*Worcester.*
Eva Laurena Jordan	*Old Orchard, Me.*
Catherine Agnes Kennedy	*Worcester.*
Teresa Mary Larkin	*Worcester.*
Mary Ellen Loughlin	*Worcester.*
Luta Belle Lincoln	*Worcester.*
Harriet Howe Maynard	*Townsend.*
Mary Martha Moran	*Worcester.*
Rupert Henry Murray	*Worcester.*
Edith Gertrude Newton	*Westminster.*
Jennie Dora Norcross	*Sutton.*
Mary Catherine O'Connor	*Worcester.*
Eliza Frances Palmer	*Worcester.*
Minnie Partridge	*Medway.*
Mary Brown Porter	*Louisville, Ky.*
Mabel Emma Richardson	*Grafton.*
Mary Elizabeth Ridler	*Worcester.*
Florence Louise Seagrave	*Uxbridge.*
Nellie Dascombe Temple	*Gardner.*
Florence Helen Towne	*Mendon.*
Catherine Rachel Wheatley	*Worcester.*
Alice Gertrude Whitcomb	*Worcester.*

THIRD CLASS.

Lena Roxanna Adams	*Oakham.*
Henrietta Maria Ager	*Worcester.*
Margaret Eleanor Ayers	*Shrewsbury.*
Saraetta Ballou	*Uxbridge.*
Agnes Maria Blanchard	*Harvard.*
Edith Minnetta Brown	*Worcester.*
Ella Louise Brown	*Worcester.*
Jessie Sophronia Clapp	*Worcester.*
Martha Susan Cutting	*Boylston.*

Flora Mabel Desper	*Barre.*
Mary Sophia Doescher	*Cherry Valley.*
Ellen Doyle	*Worcester.*
Nellie Gertrude Donovan	*Worcester.*
Bessie May Edmands	*Westborough.*
Emma Alice Gardner	*Worcester.*
Agnes Gertrude Garvey	*Worcester.*
Mabel Howard Goodale	*Leominster.*
Eva Josephine Harrington	*Paxton.*
Agnes Teresa Healey	*Whitinsville.*
Mary Ignatia Healy	*Worcester.*
Florence Louise Johnson	*Worcester.*
Julie Maria Jones	*Worcester.*
Fanny Maude Joy	*Manchester, N. H.*
Margaret Ellen Joyce	*Worcester.*
Florence Caroline King	*Worcester.*
Helen Maria King	*Worcester.*
Rosa Helena Mahan	*Worcester.*
Nellie Elizabeth McCarthy	*West Boylston.*
Agnes McMahon	*Worcester.*
Marietta McNulty	*Worcester.*
Mary Eloise Morrill	*Derry, N. H.*
Mary Harrington Perry	*Auburn.*
Grace Platt	*Worcester.*
Katie Frances Simonds	*Ashby.*
Nellie Thurston	*Worcester.*
Mary Reed Townsend	*Bolton.*
Eva Leolan Truscott	*Worcester.*
Nellie Jane Wattie	*Worcester.*
Sarah Carr Wilder	*Spencer.*
Lura Augusta Wiley	*Hardwick.*

FOURTH CLASS.

Louise Maria Bray	*Boylston.*
Catharine Maria Campbell	*Worcester.*
Elizabeth Loretta Carmody	*Worcester.*
Winifred Margaret Conlin	*Spencer.*
Hannah Gertrude Cooney	*Worcester.*

Ellen Agnes Courtney	*Worcester.*
Mary Frances Crane	*Worcester.*
Elida Maria Crawford	*Chester, N. H.*
Margaret Loretta Cunningham	*Worcester.*
Kate May Currier	*Whitinsville.*
Elizabeth Amanda Rice Daniels	*Greenfield.*
Annie Peabody Day	*Enfield, N. H.*
Rose Gertrude Doherty	*Worcester.*
Theresa Veronica Dowd	*Worcester.*
Mary Margaret Eustace	*Clinton.*
Bessie Edith Farwell	*Clinton.*
Margaret Jane Fennell	*North Brookfield.*
Ellen Teresa Foley	*Worcester.*
Emma May Gallup	*Worcester.*
Margaret Mary Gaynor	*Worcester.*
Josephine Agnes Griffin	*Worcester.*
Sarah Teresa Hanley	*Worcester.*
Mary Julia Haas	*Shrewsbury.*
Catherine Ellen Heagney	*Clinton.*
Alice Christina Heaphy	*Worcester.*
Edith Mary Hicks	*Auburn.*
Mary Eleanor Higgins	*Worcester.*
Susie Hathorn Kelton	*Hubbardston.*
Myrtis Isabel Kirby	*Paxton.*
Louisa Christina Lof	*Worcester.*
Catherine Maria McHugh	*Worcester.*
Grace Lucy Marcy	*Auburn.*
Mary Agnes Martin	*Worcester.*
Abigail Frary Newton	*Greenfield.*
Georgiana May O'Connor	*Worcester.*
Ida Minerva Parsons	*Spencer.*
Emily Beverly Pellet	*Worcester.*
Belle Frances Phelon	*Worcester.*
Emma May Rawson	*Worcester.*
Minnie Frances Ronayne	*Worcester.*
Bertha Edna Sanders	*Templeton.*
Elliott Almarand Sprague	*Worcester.*
Bertha Maria Stone	*Auburn.*

Eleanor Cornelia Torrey	*Dorset, Vt.*
Mary Ella Whitcomb	*Worcester.*
Grace Woodbury	*Oxford.*

SPECIAL STUDENT.

Toshihide Shinoda,	*Tokio, Japan.*

SUMMARY OF NUMBERS.

Graduates' Class	49
First Class, January, 1889	25
First Class, June, 1889	18
Apprentices	31
Second Class	35
Third Class	40
Fourth Class	46
Special Student	1
Total number of different pupils in attendance for the year 1888–89	245

CIRCULAR OF INFORMATION.

HISTORICAL SKETCH.

The following extract, from the Thirty-seventh Annual Report (1872–73) of the Board of Education, gives in outline a history of the establishment of this school: —

"By the terms of a Resolve which went into effect on the twenty-fifth day of June, 1871, the Board of Education were authorized and required to establish a State Normal School in the city of Worcester; and the Trustees of the Worcester Lunatic Hospital were authorized and required to convey to the Board of Education and its successors a tract of land of not more than five acres, to be located by the Governor and Council, within certain limits fixed in the Resolve. An appropriation of sixty thousand dollars was made, upon condition that the city of Worcester should pay the Board of Education for the purposes named in the Resolve the sum of fifteen thousand dollars. This condition was promptly complied with. The tract was located by the Governor and Council Sept. 2, 1871; and on the nineteenth day of September, 1871, the conveyance was made by the Trustees of the Hospital to the Board of Education and its successors in trust, as directed.

"The tract of land located is upon Hospital Hill in Hospital Grove (formerly so called), within a short distance of the new Union Depot now in process of erection,—a point at which, when the railroad arrangements now in progress shall be completed, pupils residing on the line of either of the roads leading into the city of Worcester can arrive in season for the commencement of school each day, and take the cars to return after the school exercises are finished."

The exercises of dedication took place on Friday, Sept. 11, 1874; and on the following Tuesday (September 15) the school was opened to pupils.

DESCRIPTION OF THE BUILDING.

The building is a large, three-story, massive structure, built of stone taken from the hill upon which it stands. Its position allows an extensive view of Worcester and its surroundings. From the front steps one looks down through clumps of trees, over the city lying spread within an inner circle of rolling country. The site, moreover, has all the advantages that light and air can give it. Though situated upon the outskirts of Worcester, it is not more than twenty minutes' walk from the Union Depot, wherein centre the various lines of railroad by which a large proportion of the pupils come in daily from their homes.

In its interior arrangement the building is spacious and well fitted to the educational needs of the school. On the first floor is a large corridor, running the entire length of the building, and connecting the two entrances. On one side is a laboratory, and a room containing a well-equipped work-bench, and a carefully chosen collection of specimens specially illustrative of the work in Natural Science carried on in the adjoining room. On the other side is a lunch-room, provided with tables and hot-closets, — the place of rendezvous for probably seven-eighths of the pupils every day between the hours of twelve and one. In addition there are, on this floor, unusually large and commodious dressing-rooms. On the second story is the teachers' room, and from it a door opening upon the platform of the hall, — a room of exceptional dimensions, amply lighted, and well set off with busts of eminent men, and with pictures, for the most part gifts of past graduating classes. On the sides are shelves containing carefully selected books of well-recognized value. The hall has several entrances, and it communicates directly with three recitation-rooms. Over against the entrance to the teachers' room is a room set apart and arranged for the comfort of such pupils as are taken ill, or in any way feel indisposed during school hours. Between the second and third floors there is a half-story containing class-rooms, and above this a well-stocked model-room and the drawing-room, besides other spacious rooms intended, though not all at present used, for class-

rooms. The building is heated by hot air as well as by steam. Special attention has been paid to ventilation, and to all that can tend to add to the health, comfort and best interests of the pupils.

AIM AND PURPOSE OF THE SCHOOL.

The Board of Education, by a vote passed May 6, 1880, stated the design of the school, and the course of studies for the State Normal School, as follows: —

"The design of the Normal School is strictly professional; that is, to prepare in the best possible manner the pupils for the work of organizing, governing and teaching the public schools of the Commonwealth.

"To this end there must be the most thorough knowledge, first, of the branches of learning required to be taught in the schools; second, of the best methods of teaching these branches; and, third, of right mental training.

"The time of one course extends through a period of two years, of the other through a period of four years, and is divided into terms of twenty weeks each, with daily sessions of not less than five days each week.

"STUDIES.

"TWO YEARS' COURSE.

"Arithmetic, Algebra, Geometry, Book-keeping.

"Physics, Astronomy, Chemistry.

"Physiology, Botany, Zoölogy, Mineralogy, Geology, Geography.

"Language, Reading, Orthography, Etymology, Grammar, Rhetoric, Literature, Composition.

"Penmanship, Drawing, Vocal Music, Gymnastics.

"Psychology, Science of Education and Art of Teaching, School Organization, History of Education.

"Civil Polity of Massachusetts and of the United States, History, School Laws of Massachusetts.

"FOUR YEARS' COURSE.

"In addition to the studies named above, the Four Years' Course includes Advanced Algebra and Geometry, Trigonometry and Surveying.

"Advanced Chemistry, Physics and Botany.

"Drawing, English Literature, General History.

"Latin and French required; German and Greek as the Principal and Visitors of the school shall decide.

"The Visitors, at the request of the Principal of the Worcester School, may have authority to substitute German for French, as they think the interests of the school from time to time demand.

"The above is an enumeration of the studies. The order of the studies in the course is determined by the Principal of each school, with the approval of the Visitors of that school."

It needs to be stated that while the foregoing list of subjects marks out the field covered in the school curriculum, it gives no adequate idea of the actual work done. It is made a special aim to seize every opportunity to give the pupils the benefit of whatever tends to fit them for the work of teaching. The spirit of this endeavor pervades the whole school. It influences the mode and character of most of the exercises, and imparts to the whole work a tone and zest difficult to describe, but which determines whatever of distinct character the Normal School possesses.

APPRENTICESHIP.

In addition to the work of the study and the class-room, systematic observation of schools and actual practice in teaching, under the joint supervision of the city superintendent of schools and the faculty of the Normal School, constitute an important element in our course of training.

The general character of what is known in this school as the "apprenticeship" is this: The student, after three terms, or a year and a half in the Normal School, is allowed to go into one of the public schools of the city of Worcester to serve as assistant to the teacher of that school; to take part in the instruction, management and general work of teaching, under the direction of the teacher; and even to act as substitute for the teacher for an hour, a half-day or a day, at the discretion of the latter and with the approval of the superintendent. One student only at a time is assigned to any one teacher; but each student serves in at least

three grades of schools in the course of his term of service, the duration of which is six months, or half a school year. After finishing his apprenticeship the student resumes his course at the Normal School, spending another half-year there before receiving his diploma.

During the period of apprenticeship four days of each week are devoted exclusively to it by those employed in the work. One day of the week (Wednesday) is spent by them in the Normal School, where they are employed, not in the ordinary study and work of the institution, but in the following manner: —

They hold such consultation with the teachers of the school, and make such use of books, as may be most helpful to them in their immediate work as apprentices.

They make informal statements to the school of such facts of their experience as may be of advantage to the other students to hear, — concerning ways of teaching, cases of discipline and the like, — keeping in mind always the private character of the daily life of the school-room, and under special warning against revelations that might seem objectionable.

Each apprentice keeps a diary of the occupation and experience of every day's service, and this record is inspected by the faculty of the Normal School. He also makes out a report at the end of his term, in which he gives his own estimate of his success in his work.

The following copy of a diary kept by one of the apprentices, not, however, with any notion of its being printed, gives an account of a week's experience: —

MONDAY, MARCH 9, 1885. — Instead of having the children read wholly from the readers, we let one class read from slips of paper upon which Miss —— and I have, as we had time, been copying selections from another book. I should have thought the children would have liked it very much for a change, but they didn't seem to like it any better than reading the usual lessons. I think the reason was, that, as every slip was different, those who were not reading had to sit up and listen, and couldn't even prompt or correct mistakes — they like to have some active part in what is going on.

I have occasionally, as I had time at noon, drawn some picture on the blackboard. One night after school, pointing to a picture of a rabbit on the blackboard, I asked a boy what it was. "Rabbit," he answered, quickly. "How did you know?" "Long ears," was his brief reply.

TUESDAY, March 10. — Each morning, after the opening exercises, the children have singing and also usually some individual exercise in music. Although most of them have been in school less than two years, they seem very skilful in reading the notes by letter and in singing from numbers that are put on the board, thus,— 1, 2, 3, 2, 3, 3, 1, 3, 2, 4, 5, 3, 1, 1. If they are giving attention and keep the place, they can follow the changes almost perfectly. Once in a while, when they are singing, some boy will try to put in variations by singing up on *very* high notes. The rest usually pay no attention to this, but sing on in correct tune.

To-day I told the first class that they might write a story about a boy and girl who went a-fishing, making it up and writing whatever they pleased. Some went directly to writing, while others had to think quite a while. Finally, one boy said, "I don't know how to commence." I told him to say, "Once upon a time," if he couldn't think of anything else. Most of them had a more original beginning. One girl covered both sides of her slate.

One of the shorter ones was something like this: —

"John and his sister went with him and they caught six of them they were nice and then they took them home and skin them with a knive and eat them and they were nice and every one has a pice and they did look good they ate them all up an did not saye I don't like fish."

WEDNESDAY, March 11. — At the Normal School. One of the teachers talked to us to-day about teaching children the sums of certain numbers at sight. If the children could learn the sums of some numbers and remember them, it would save them some time and trouble, I should think. If they could only remember that $2+2=4$, $3+1=4$, $2+3=5$, etc., without counting up, it would help them say their tables and do combination examples.

During one of the periods, as we did not have enough to talk about in connection with our school work, the teacher commenced reading a very interesting story to us. It is an English translation of a Danish drama, and I hope we shall hear the whole of it.

On the platform we apprentices sang the "action song" that we have been learning. I feared that some of us would laugh, but we succeeded in keeping sober.

THURSDAY, March 12.— This afternoon there were three lady visitors in our school. It has previously seemed to me that these children hadn't learned the art of "showing off," or of acting differently when visitors are in; but to-day they seemed a little conscious of being watched, and were quite mischievous and ready to laugh. Once in a while the ladies would see something that they could not help laughing at, and that seemed to please the boys, and they laughed too.

The teacher asked me this afternoon to tell the children a story. So I told them one that I happened to hear read last evening, "The Dog of Flanders." I changed it a little, so that it should have a pleasant ending. The children are always quiet and orderly when a story is told to them.

The teacher suggested that I have the children recall and write, some time to-morrow, a part of the story I told to-day.

FRIDAY, March 13.— To-day I gave the drawing lesson to the second class, instead of to the whole school, as I usually do. I like better to give it to the whole school; there seems to be more interest, and better attention is given.

Yesterday we drew an ellipse and then changed it into a locket. To-day I told them to make the same thing that we drew yesterday. Quite a number remembered and drew the locket.

Two of our nice girls left school to-day. The school has all the time many more boys than girls. I wondered why, until my teacher told me that a great many of the girls go to the Sisters' School.

One of our big boys cried with toothache this morning. I pitied him, and I guess the teacher did, for she sent him home at recess. He did not come back this afternoon. Just after school I saw him on Front Street selling papers, and looking as well as usual.

The apprenticeship is designed to give the student practical acquaintance with the work of teaching, and training in that work. It is founded in the conviction that, whether education be a science or not, teaching in the public schools of Massachusetts is an art, — an art to the successful practice of which there is need of some initiation under the guidance of experience and skill; an initiation akin to that which an apprentice passes through in learning his trade.

A secondary purpose is to furnish the faculty of the Normal School with more full and satisfactory data for their estimate of the teaching ability of students. How the recruits will behave under fire cannot be

determined by drill in the manual, or by dress parade. The apprenticeship goes far toward answering the important question. The apprentice is visited by the faculty of the Normal School while engaged in his work, and is carefully observed and assisted by suggestions. The teacher of each school in which he has served makes out a report in the following form: —

[STATE NORMAL SCHOOL AT WORCESTER.]

Report of the Apprentice-Work of.....

Grade..... Street School.

Time from..... to.....

Scale, 10 — Use no fractions.

No. of Absences.	No. of Tardinesses.	Power of Control.	Power of Interesting.	Skill in Questioning.	Skill in Explaining and Illustrating.	Enthusiasm.	Bearing.

1. What traits of excellence (if any) have been shown in teaching or management?

2. What weakness or deficiency?

[Signature].....

The additional six months of preparation required by the system under consideration secure to the student greater maturity of body and mind. The need of such maturity is apparent in the case of the majority of those who enter upon the work of teaching.

That the object of the apprenticeship is attainable by the plan adopted is not merely probable, but is already matter of experience. The method, although believed to be new in this country, is not in itself a thing new or untried.

The German system of public education requires of the candidate for the office of teacher a season of service under direction, of probation under supervision, the essential elements of which are embodied in this apprenticeship. Something like it also prevails extensively in England.

Moreover, the method is simply the extension of one that was for five years in successful operation in this school. The students are found to derive from their experience a fresh interest in their chosen work. They realize the practical bearings of the principles and methods they have studied; they acquire the "courage of having done the thing before;" they test their remedies for the school diseases of inattention, disobedience and the like, by trial on actual patients; they acquire skill that is of vast moment to them at the critical period when they take charge, as teachers, of their first school.

It is no small evidence of good results that the school board of the city of Worcester heartily approve the system, on the ground of the benefit accruing indirectly to the city schools, through the greater fitness of the apprentices to become teachers.

As the student of the Normal School who passes successfully through the period of apprenticeship receives a certificate of the fact in connection with his diploma at graduation, the extra time required for the experience must in almost every case be more than made good by the greater probability of securing a position, and the greater likelihood of success at the outset of the teacher's career.

There are, however, individuals in the school for whom it is impossible or impracticable to undertake this special preparation. The apprenticeship is not enforced upon any student; it is simply recommended. Individuals who do not enter upon it enjoy all the advantages of the school with this single exception.

THE STUDY OF CHILDREN.

The school is much indebted to Prof. G. Stanley Hall for a suggestion that the study of psychology might be pursued in part by the original observation of children. From his idea as a starting point, a scheme

for this purpose has been worked out and adopted as a permanent part of the school curriculum.

The principal requests the students to observe the conduct of children in all circumstances, — at home, at school, in the street, at work, at play, in conversation with one another and with adults, — and record what they see and hear as soon as circumstances will permit. When the nature of the work is explained to the school, great emphasis is placed upon the necessity of having the records genuine beyond all possibility of question; of having them consist of a simple, concise statement of what the child does or says, without comment by the writer; of making both the observation and the record without the knowledge of the child; and of noting the usual, rather than the unusual, conduct of the individuals observed.

For convenience in classification, blanks of five colors are provided for the records. White paper is used for such observations as students make themselves; red for well attested ones reported by others; yellow for reminiscences of their own childhood; green for mention of whatever they read on the subject; and chocolate for observations that extend continuously over a period of time. Each blank has the following heading: —

[STATE NORMAL SCHOOL AT WORCESTER.]

STUDY OF CHILDREN.

1. Date, ...

2. Observer's name, ... age, ...

   P. O. Address, ...

3. Name (or initials) of person (child) observed, ...

   sex, ...; nationality, ...; age (yrs. and mos.), ...

4. Length of time between making the observation and recording it, ...

RECORD.

.....

If the record is from hearsay, the names of both recorder and observer must be given.

Pupils write the records at their convenience (immediately after making the observation is the best time), and put the papers in a designated place. A teacher reads them from time to time, and classifies them under the heads, — knowledge, reflection, imagination, conscience, feeling, play, etc.

Both teachers and pupils feel that no other part of the pedagogical training has so direct an influence in developing the qualities most sought in a teacher. It is clearly manifest that it awakens curiosity concerning the phenomena of child nature, excites intelligent sympathy with children, and contributes to skill in discipline and instruction. Graduates and apprentices give abundant testimony on all these points.

The work of making observations is not compulsory, but nearly all members of the school engage in it from genuine interest. A few selected papers are placed from time to time where they may be read by all who care for them. How far these serve as stimulus and example is not known, but every day, not excepting the first day of a term, brings its supply of records, even though the subject may not have been explicitly mentioned for months. It is indeed the most nearly self-sustaining exercise in the school.

Many valuable records are reports of what is seen in the street on the way to or from school, but perhaps the highest value attaches to the reminiscences of the observer's own childhood. To recall one's own feelings, motives, and conduct in circumstances that are repeated in the life of every child, proves, as might be expected, in a high degree salutary, and affects sensibly the manner of judging others. The frankness and humor with which this kind of report is made are often very interesting.

Systematic instruction in psychology is aided both in the way of preparation and supplement by this additional study. Pupils are thus furnished at the outset with facts of their own observation, which serve as elementary materials for scientific classification and study; they have a habit of observing a certain class of phenomena, and have received suggestions and cautions that are of service to them in other depart-

ments; they are able to pass more easily to mental science, because they have learned that that, as well as natural science, can be pursued by an objective method; they have an already awakened and active interest in the subject that gives them pleasure in learning general principles, sometimes in part known by their own observations; and, moreover, they attach a different value to a text-book which they see is a natural outgrowth of an experience like their own.

As all students make observations, many records have no value apart from the wholesome endeavor that made them; but a progress in the significance of the things noticed and in the manner of recording them is apparent. During the latter part of a term the proportion of significant and valuable papers is greater than during the first part. All papers are carefully preserved (about 2,000 have been collected each year), and it is hoped that they may be of value to students of child-nature; but the primary object of collecting them is the training of prospective teachers, and so highly does the work commend itself as a means to this end, that, if nothing ulterior to this is gained, complete satisfaction, and no disappointment, will be experienced.

REQUIREMENTS FOR ADMISSION.

THE REQUIRED AGE is, for young men, seventeen years; for young women, sixteen.

The *average* age of those admitted is usually a little less than nineteen years. Pupils who enter at an age much below the average are rarely able to get the full benefit of the instruction given without remaining more than two years in the school.

Candidates must show upon examination good capacity and general intelligence, and also fair attainments in the following branches; viz., reading, spelling, penmanship, geography, arithmetic, English grammar, history of the United States.

Other things being equal, those gain most advantage from the course who have spent the longest time in preparation.

The entrance examination is often passed creditably by pupils who have made rapid progress in the required studies, but who have not sufficient intellectual maturity to pursue profitably a more advanced course of instruction. It will be seen, therefore, that three things must be considered in the case of each candidate for admission: (1) *age*, (2) *time spent in preparation*, (3) *ability to pass the examination*.

The standard may be reached in any one of these things and the candidate still be unprepared to enter, by reason of deficiency in one or both of the others.

The scope and character of the examinations are indicated by the "Questions" printed in the Appendix.

Express warning is giving against trying to enter in the hope of "making up" deficiency in any of these departments.

Candidates must present certificates of good character and good health, must promise a faithful observance of school regulations, and must declare in writing their intention to complete the prescribed course of study and training, and to engage in teaching after graduation.

Time of Examination for Admission. — The regular examination begins on the first day of each term (see Calendar); and applicants must be present at that time, unless detained by sickness or other imperative and unforeseen necessity.

The examination continues through two days; and lunch should be brought each day, on account of the distance of the school from the centre of the city.

Candidates for admission may present themselves for examination six months, or even a year, before they expect to join the school, and are advised to do so, if convenient, for the sake of becoming better acquainted with the nature of the requirements.

Students are not admitted to advanced classes, and must not expect to complete the elementary course in less than two years.

Special Students. — Applications having been occasionally made by college graduates to take a special (elective) course at the school, it has

for some time been the rule to allow such, in common with graduates of normal and scientific schools, the full advantage of the institution. On the completion of such a course, a certificate is given, specifying the character and quality of the work done, and the fitness of the candidate to serve as a teacher in the public schools.

LEAVE OF ABSENCE. — It is often the case that, through weak health or stress of circumstances, pupils may be obliged to miss one, two, three or more terms. It is in the interest of such that the course need not be pursued uninterruptedly to the end. Students may, and often do, obtain leave of absence to teach or to rest, and resume their work afterwards. This divides, but of course does not shorten, their course of study.

TERMS OF TUITION. — Tuition, and also the use of all text-books, is free to such as intend to teach in the public schools of Massachusetts, whether residents of this State or not. Those whose purpose is to teach in other States or in private schools are required to pay in advance fifteen dollars a term (thirty dollars a year) for tuition. A fee of two dollars a term in advance is required of each pupil, to meet incidental expenses.

Pupils who withdraw from the school without permission of the Principal must pay at the rate of fifteen dollars a term for the tuition they have received.

GOVERNMENT.

The government of the school is not a government of rules, nor even of laws. The school is not without law, but the pupils are led by suggestion, encouragement and admonition, to become a law unto themselves. That this is a statement not merely of what is thought desirable as a method of government, but of what is actually accomplished, is the testimony of both official and casual visitors of the school. The pupils hardly realize that they are governed; they feel that they govern themselves.

HEALTH.

INSTRUCTION IN HYGIENE. — A marked feature of the school is the special attention directed not only to the physical well-being of the pupils, but to such instruction as will enable them to deal practically with living questions of hygiene as they arise in every-day life. The pupils are both taught to understand the conditions of healthful life, and trained and assisted to put into practice the instruction they receive in the care of health. They have careful oversight, and are advised individually according to their needs. No pupil enters the school without furnishing a physician's certificate of good health, and no pupil is allowed to remain whose physical condition is not thought equal to the demands of the school work. In cases of fatigue, exhaustion, or such indisposition as may unfit pupils for duty, they are advised to take immediate rest; and it is for the use of such that a quiet room, fittingly furnished, and one of the lightest and pleasantest in the building, has been set apart. Special efforts are made to counteract any tendency to over-work, over-excitement, or hurry. No recitations or study periods are longer than forty minutes, and during the ample and frequent intervals of relaxation school work is completely put aside.

RECREATION. — The pupils find a fund of social recreation, not only in the hall, which is provided with a piano, and which is thrown open to them to enjoy themselves as they will, but in the large lunch-room used exclusively for the purpose that its name indicates. Shortly after midday the luncheons, left since the last recess in the hot-closet, are brought out, and the room is soon made lively by the voices of a hundred or more pupils, seated in groups around tables filled to overflowing with the several contributions to this noonday feast. During the warmer months, however, the lunch-room has even to yield in attractiveness to the tree-shaded grounds about the building.

PHYSICAL EXERCISE. — A special time is set apart every day for physical exercises of some sort. These are not set calisthenic move-

ments of the usual kind, but take the form of thorough drill in the throwing of light balls, the handling of sticks or wands, marching to music, singing in chorus, or such exercise as is fitted to develop vigor and activity of body at the same time that it cultivates habits of precision and accuracy, and fits the pupils to meet some of the difficulties of drill and discipline in the profession for which they are being trained.

PLATFORM EXERCISES.

No efforts are spared to train the pupils to habits of self-reliance. It is to this end that special importance is attached to the platform exercises. These occupy a half-hour or so every day, and during this period pupils volunteer, each for five minutes or more, to read or recite, or to talk to the school upon any subject which they may have chosen. At such a time they have constantly to meet the criticism and questions of teachers and fellow-pupils; and thus the exercise has been found to be valuable, not only in training the pupils to use the English language with facility and force, and to speak with distinctness and accuracy, but in bringing them to face the sort of difficulties that they may be expected to meet in their profession. On Wednesdays the apprentices have exclusive possession of the platform, and on each such occasion they give to the school, as elsewhere described, the results of their past week's experience in teaching.

THE LIBRARY.

The library has been made to contribute materially to the progress of the pupils, both in general intelligence and literary culture, partly in consequence of the device of placing it in the school hall and in the recitation-rooms, where it can be used at all times without formal permission. Books may be taken home on Saturday afternoons and kept until Tuesday; and, as they can be obtained more easily from this library than from any other, a large part of the pupils confine their reading to this collection. The result is an acquaintance with a somewhat large

number of books of the best sort, and a manifest improvement in literary taste and in standards of excellence.

The almost unrestricted use of the library is not abused. While the appearance of the books is convincing evidence that they are read, not more than two or three volumes have been lost or mutilated in the fifteen years of the existence of the school, and it is rarely necessary to inquire for a book when it is needed.

The number of volumes is at present more than 2,000, and additions are constantly made, up to the limits of the funds available for that purpose.

GENERAL FACILITIES.

Incidental Advantages. — Important facilities for general improvement are offered to pupils in the libraries, institutions and other means of culture, in which Worcester is rich.

The extensive and well-arranged museum of the Worcester Natural History Society is open for inspection, and specimens in all departments can be borrowed by teachers and students, and taken to the school for purposes of study and illustration.

The hall of the American Antiquarian Society contains a notably rich store of interesting exhibits, and the library includes a rare treasury of books pertaining to American history.

The Free Public Library stands unique among the institutions of the kind in this country for the effective relationship existing between it and the schools. Its large and well-endowed reference library, its well-filled circulating department, its reading-rooms, supplied with the leading domestic and foreign papers and periodicals, afford exceptional opportunities to the schools. Special facilities are offered to teachers and pupils, and the librarian is unsparing in his efforts to render every aid in the choice and use of books, or in any way in which he can assist the reader.

Railroad Fares. — The six lines of railroad centring in Worcester afford easy communication with the neighboring towns and villages.

Season-tickets or mileage-tickets are issued to pupils of the Normal School at greatly reduced rates, and the daily sessions of the school are so arranged as to accommodate those who wish to come and go by the cars.

GENERAL INFORMATION.

Board and Rooms. — Students are advised to board in the city, if possible. Not much is saved pecuniarily by those who go in and out every day by rail, and the loss of time and the incidental exposure put them at serious disadvantage.

There is no boarding-house connected with the school; but suitable accommodations in respectable private families in the neighborhood, approved by the authorities of the institution, are easily obtained. To such as seek information or advice in this direction, the Principal is ready to give every assistance in his power.

In the case of pupils of the Normal School, the average cost of board (generally including room, fuel, light and washing) has been ascertained to be about four dollars per week.

Incidental Expenses. — The necessary incidental or miscellaneous expenses have averaged about five dollars for each pupil for the term, or ten dollars a year.

These averages imply strict economy on the part of pupils, and in making an estimate of expenses it would probably be unsafe to go below the above figures.

STATE AID.

The Commonwealth has regularly appropriated several hundred dollars a year to each of its Normal Schools, to be divided among such pupils as are most needy and deserving. This school of course receives its proper share of such funds, and is able to render assistance to a number of students each year.

The State also gives the use of all the text-books required in the course, as well as free access to an ample and well-selected library of reference and general literature.

NORMAL SCHOOL SCHOLARSHIPS AT HARVARD.

There are eight scholarships in the scientific school of Harvard University for the benefit of graduates of the State Normal Schools. The annual value of each of these scholarships is one hundred and fifty dollars, which is the price of tuition; so that the holder of the scholarship gets his tuition free.

The incumbents are originally appointed for one year on the recommendation of the principals of the schools from which they have been severally graduated. These appointments may be annually renewed on the recommendation of the faculty of the scientific school.

TO VISITORS.

A hearty invitation is extended to the parents and friends of pupils, to all, in fact, who may feel inclined, to visit the school, and see the current and method of its daily working. The first two and last two weeks of a term are, obviously, the least favorable times for a visit.

The school committees and superintendents of the neighboring towns are particularly and earnestly urged to make themselves acquainted with this school, — especially designed, as it is, to aid them in their work of improving our public instruction, — and to introduce to its advantages such young teachers of promise as aspire to more thorough preparation for their calling.

The school is not in session on Mondays. On other days the hours (leaving out the noon recess) are from twenty-five minutes past nine o'clock to five minutes to four, an arrangement that has been found the most convenient for ninety-six per cent. of the pupils.

APPENDIX.

GRADUATES.

NOTE.— All the graduates have been examined and approved as teachers for the schools of Worcester by the examining committee of the school board of the city.

☞ When any change of name or residence has been reported, it is indicated immediately under the name and residence at the time of graduation. Graduates will see that it is very desirable to have notice of such changes promptly sent to the Principal.

FIRST CLASS, JULY, 1876.

NAMES.	RESIDENCES.
Lydia Walker Ball	*Upton.*
Harriet Crook	*Valley Falls.*
Mrs. Fred. Snider (Bay State),	*Northampton.*
Ella Eudora Goddard	*Worcester.*
Ella Jane Lyford	*Spencer.*
	Worcester.
Joseph Chauncey Lyford (Secretary)	*Spencer.*
	Worcester.
Marianna Newton	*Worcester.*
Mrs. Henry E. Chace,	*Fall River.*
Alice Vara Proctor	*Spencer.*
Mrs. Nathan A. Cobb,	*Sydney, Australia.*
Hannah Arabella Tucker	*North Brookfield.*
Celia Eliza Whiteman	*Le Roy, N. Y.*
	Batavia, N. Y.
Fanny Alberta Williams	*Worcester.*

SECOND CLASS, JANUARY, 1877.

Frances Maria Athy	*Worcester.*
Effie Lillian Bennett (Secretary)	*Worcester.*
Sarah Ann Boyd	*Cherry Valley.*

NAMES.	RESIDENCES.
Florence Emily Brown	*East Douglas.*
Mrs. Horace Martin, *East Douglas.*	
Harriet Abigail Brown	*East Douglas.*
Mary Ellen Cecilia Carroll	*Worcester.*
Jennie Luliona Dearborn	*Worcester.*
Clara Amelia Grout	*Worcester.*
Mrs. John W. Nichols, *Barre, Vt.*	
Milly Jane Hall	*Upton.*
Mrs. Henry L. Patrick, *Hopedale.*	
Gertrude Hawkins	*Fitchburg.*
Mrs. Charles F. Wilson, *Fitchburg.*	
Augusta Seaver Houghton	*Wilkinsonville.*
Mrs. Louis E. Chase, *Wilkinsonville.*	
Annie Devereaux Johnson	*Worcester.*
Mrs. James Logan, *Worcester.*	
Helena Adelaide Marie Kalaher	*Worcester.*
Gertrude Mitchell King	*Nantucket.*
Margaret Jane McCann	*Worcester.*
Mary Elizabeth Murphy	*Worcester.*
Philadelphia, Pa.	
Jeanette Maria Putnam	*Northbridge.*
Mrs. Edward E. Clark, *Dorchester.*	

THIRD CLASS, JULY, 1877.

Carrie Maria Adams	*Worcester.*
Emma Abbie Bigelow	*Holden.*
Mrs. E. C. Houghton, *Portland, Me.*	
Ida Frances Boyden	*Oakham.*
Mrs. Alvan H. Brown, *East Douglas.*	
Jennie Ellis Chandler	*Duxbury.*
Bessie Alice Chase	*Worcester.*
Mrs. Edmund P. Capron, *Boston.*	
Josepha Percy Chase	*Worcester.*
Providence, R. I.	
Katie Agnes Coughlin	*Worcester.*
Mrs. David L. Bradt, *Worcester.*	
Mabel Crane	*Blackstone.*
Mrs. W. Henry DeLong, *Worcester.*	
Mary Rebecca Doherty	*Worcester.*
Mrs. Thomas D. Connolly, *Beverly Farms.*	
Eliza Ann Fairbanks	*Westborough.*
Mrs. C. H. Hersem, *Westborough.*	

NAMES.	RESIDENCES.
Ellen Montgomery Fitts	*Worcester.*
Mrs. Robert M. Higgins, *St. Louis, Mo.*	
Mary Elizabeth Fitzgerald	*Worcester.*
Ida Louise Gaskill (Secretary)	*Blackstone.*
Ella Eudora Hall	*Worcester.*
Mrs. Alfred C. Bradish, *Worcester.*	
Mary Field Harrington	*Worcester.*
Anna Beatrice Hopkins	*Worcester.*
Mrs. John H. Leland, *Worcester.*	
Olive Rice Jenks	*Spencer.*
Mrs. Benjamin S. Crocker, *Topeka, Kan.*	
Luci Naomi Jennison	*East Templeton.*
Mary Ann Kean	*Worcester.*
Mrs. James Early, *Worcester.*	
Anna Maria Murray	*Worcester.*
Katie Ann McCarthy	*Worcester.*
Minnie Willietta Sherman	*Worcester.*
Anna Maud Smith	*Worcester.*
Mrs. Otis A. Merrill, *Lowell.* Died in Lowell, April 30, 1886.	
Hattie Urania Thwing	*Worcester.*
Mrs. Charles F. Smith, *Worcester.*	
Annie Teresa Timon	*Worcester.*
Isabella Livingston Tullis	*Worcester.*
Mrs. William A. Harding, *Brooklyn, N. Y.*	
Jennie Abbie Whitney	*Worcester.*
Mrs. Henry H. Browning, *Haverhill.*	

FOURTH CLASS, JANUARY, 1878.

Lizzie Joanna Andrews	*Worcester.*
Addie Jane Booth (Secretary)	*Worcester.*
Mrs. Alvarado A. Coburn, *Worcester.*	
Ella Agnes Casey	*Worcester.*
Elizabeth Edwina Chapin	*Worcester.*
Jennie Cora Clough	*Worcester.*
Edna Currier	*Worcester.*
Mrs. Amory C. Holden, *Worcester.*	
Anna Crosby Cutting	*Templeton.*
Katie Anna Fallon	*Worcester.*
Mrs. Thomas W. Butler, *Worcester.*	
Addie Eliza Kendall	*Worcester.*
Mrs. William E. Waite, *Worcester.*	

NAMES.	RESIDENCES.
Armina Lillian Paul	*Worcester.*
Mrs. James C. Stewart, *Worcester.*	
Lilla Maria Rice	*Grafton.*
Mrs. Charles L. Ware, *Fort Scott, Kan.*	
Fanny Louise Smythe	*Worcester.*
Mrs. John F. Kyes, *Worcester.* Died in Worcester, April 19, 1882.	
Marietta Sykes	*Blackstone.*
Mrs. Edward D. Brown, *Minneapolis, Minn.*	
Mary Alice Winter	*Northbridge.*
Worcester.	

FIFTH CLASS, JULY, 1878.

Nettie Eliza Adams	*Fitchburg.*
Mrs. J. Chauncey Lyford, *Worcester.*	
Elizabeth Estelle Bent	*South Gardner.*
Mrs. Franklin Eaton, *South Gardner.*	
Emma Frances Brown	*Worcester.*
Isabella Newton Eddy	*Leicester.*
Mrs. Charles T. Newton, *West Boylston*	
Mary Abby Hayward	*Ashby.*
Mary Elizabeth Houghton (Secretary)	*Worcester.*
Mrs. C. David White, *Washington, D. C.*	
Isabel Pemberton Morey	*West Brookfield.*
Harriet Betsey Sargent	*South Gardner.*
West Somerville.	
Carrie Angelicia Smith	*Worcester.*
Nellie Blake Webber	*Worcester.*
Mrs. Winslow S. Lincoln, *Worcester.*	

SIXTH CLASS, JANUARY, 1879.

Jennie Irene Adams	*Fitchburg.*
Mrs. Charles F. Martensen, *Springfield.*	
Hattie Woodward Arnold	*Westborough.*
Mrs. D. O. Clark, *Warren.*	
Emma Buckley	*Worcester.*
Mary Rosalie Goddard (Secretary)	*Worcester.*
Mary Emma Hastings	*Westborough.*
Jennie Leonora Higgins	*Worcester.*
Effie Frances Kinne	*Plainfield, Conn.*
Mrs. Edwin D. Goodell, *Brookfield.*	
Katie Agatha McLoughlin	*Worcester.*

NAMES.	RESIDENCES.
Hattie Stearns Putnam	*Worcester.*
Sarah Elizabeth Rogers Mrs. Edwin N. Sanderson, *Brooklyn, N. Y.*	*Worcester.*
Adeline Estelle Sprague	*Worcester.*
Marion Capitola Tucker	*North Brookfield.*

SEVENTH CLASS, JULY, 1879.

Eugene Bacon *Nobscot.*	*Framingham.*
Mary Ella Clark	*Paxton.*
Susan Drake Died in Spencer, June 16, 1888.	*Spencer.*
Maggie Agnes Flaherty	*Worcester.*
Emma Lorette Giffin Mrs Charles H. Wright, *Haselton, Ohio.*	*Templeton.*
Katie Elizabeth Kenney *Milford.*	*Worcester.*
Ellen French Lindsay	*Grafton.*
Henrietta Agnes Murray (Secretary)	*Worcester.*
Anna Harriet Newton Mrs. Fred. Barnes, *Worcester.*	*Paxton.*
Edwin Thomas Painter, B. S. Edwin Thomas Painter, M. D., *Pittsburg, Pa.*	*Worcester.*
Emma Miller Plimpton	*Northbridge.*
Mary Agnes Rourke	*Worcester.*
Mary Abbie Sanborn Mrs. George B. Paddock, *Minneapolis, Minn.*	*West Baldwin, Me.*
Abby Brewer Shute	*Auburn.*

EIGHTH CLASS, JULY, 1880.

Sarah Maria Averill	*Plainfield, Conn.*
Cora Anna Baldwin	*Worcester.*
Mary Elizabeth Barnard Mrs. William J. D'Ewart, *Worcester.*	*Harvard.*
Mary Mead Bowen	*Mianus, Conn.*
Mary Etta Buxton Mrs. Robert W. Robinson, *Worcester.*	*Worcester.*
Sarah Maria Davis	*Webster.*
Daisy Alice Miranda Fairchild Mrs. Sidney A. Sherman, *Amherst.*	*Worcester.*
Hattie Grant Gates (Secretary)	*Worcester.*

NAMES.	RESIDENCES.
Mary Gertrude Griggs	*Worcester.*
Etta Lorenda Hill	*West Upton.*
Mrs. Edward H. Forbush, *Worcester.*	
Caroline Elizabeth Howe	*Paxton.*
Mary Anne Kane	*North Brookfield.*
Mrs. John A. Howard, *Spencer.*	
Harriet Lightbourn	*Worcester.*
Alice Eliza Meriam	*Worcester.*
Emma Sophronia Peirce	*Leicester.*
Died in Worcester, March 26, 1884.	
Nellie Louisa Pierce	*Chesterfield, N. H.*
Mrs. Fred. W. Fogg, *Worcester.*	
Rosa Isabelle Seavey	*Worcester.*
Mrs. William C. Howe, *Worcester.*	
Anna Philena Smith	*Central Village, Conn.*
Maude Mary Smith	*Grafton.*
Marina Harwood Tucker.	*North Brookfield.*

NINTH CLASS, JULY, 1881.

N. B. — Graduates whose names are marked with (A) have, besides passing through the regular course of study, served for a half year as apprentices (see page 18) in the public schools of the city of Worcester.

Selma Petronella Ahlstrom (A)	*Worcester.*
Hattie Bond Andrews (A)	*Worcester.*
Olive Maria Butler	*Worcester.*
Mrs. Charles F. Howard, *Orange.*	
Elida Maria Capen (A)	*Charlton.*
Rebecca Harlow Davie	*Worcester.*
Wilton Herbert Desper, B. S.	*Worcester.*
Edward Doolittle Fitch	*Worcester.*
Edward Doolittle Fitch, M. D., *Worcester.*	
Anna Trask Kelley (A)	*Worcester.*
Mary Emily McCormick (A)	*Worcester.*
Alice Caroline Mason (A) (Secretary)	*Worcester.*
Mrs. George F. Barnard, *Worcester.*	
Catherine Theresa Nevins (A)	*Nantucket.*
Georgiana Maria Newton (A)	*Worcester.*
Bertha May Peckham (A)	*Southborough.*
Mrs. Elmer I. Balcom, *Whitinsville.*	

NAMES.	RESIDENCES.
Elizabeth Nettie Robinson Mrs. W. S. Hincks, *Hyde Park.*	*Templeton.*
Angenette Ethelinda Stone (A) *Minneapolis, Minn.*	*Northbridge.*
Jennie Matilda Tainter (A)	*Worcester.*

TENTH CLASS, JANUARY, 1882.

Florence Bicknell (A) Died in Boston, May 28, 1885.	*Rowe.*
Alice Chapin (A)	*Auburn.*
Abbie Mitchell Dorr	*Southborough.*
Mary Blake Dudley (A) *New York City.*	*Worcester.*
Emma Gertrude Goodwin (A)	*Worcester.*
Abbie Calista Hale	*Hubbardston.*
Lizzie Frances Jones (A)	*Lunenburg.*
Fransess Dolbell Martin	*Worcester.*
Ida Marion McCambridge (A) (Secretary)	*Worcester.*
Elizabeth Adelaide Potter	*Worcester.*
Mary Ella Proctor (A) Mrs. Henry B. Quimby, *Malden.*	*Worcester.*
Anna Bush Ranger (A)	*Worcester.*
Sarah Lydia Sawyer	*Fitchburg.*
Caroline Isabel Stone (A) Mrs. William Woodward, *Worcester.*	*Auburn.*
Mabel Burnside Tew (A) Mrs. Hiram E. Barnard, *Worcester.*	*Worcester.*
Anna Laura Wells (A) Mrs. Benjamin T. Henry, *Rowe.*	*Rowe.*
Mary Blanche Wheatly (A) Died in Worcester, Feb. 7, 1886.	*Worcester.*

ELEVENTH CLASS, JUNE, 1882.

Harriet Almira Baker	*Phillipston.*
Addie Maria Blenus	*Worcester.*
Anna Theresa Cavanough (A)	*Worcester.*
Louis Richards Condry	*Groton.*
Ann Foskett (A) *Worcester.*	*Webster.*
Mary Elizabeth Horgan (A) Mrs. John J. Brennan, *Worcester.*	*Worcester.*

NAMES.	RESIDENCES.
Mary Eliza Jenks (A)	*Spencer.*
Mrs. G. Samuel Boutelle, *Spencer.*	
Julia Ardelle Mann (A)	*Blackstone.*
Edwin Scott Matthews, B. S.	*Worcester.*
Boston.	
Grace Emily Pearl (A)	*Southborough.*
Mrs. Albert C. Brown, *Fitchburg.*	
Ada Dora Saunders (A)	*Worcester.*
Mrs. John W. Dodd, *Worcester.*	
Jennie Melenda Sprout	*Worcester.*
Died in Worcester, Feb. 24, 1886.	
Anna Daniels Stowell (A) (Secretary)	*Worcester.*
Mrs. George H. Johnson, *Ketchum, Idaho.*	
Mary Florence Stratton (A)	*Millbury.*
Mrs. Walter N. Walling, *Auburndale.*	

TWELFTH CLASS, JANUARY, 1883.

Martha Dowse Adams (A)	*Worcester.*
Boston.	
Harriet Annie Colton	*Oxford.*
Mrs. Frederick A. Wellington, *Webster.*	
Mary Ellen Convery (A)	*Worcester.*
Hannah Mary Kickham (A)	*Worcester.*
Mary Catherina Morrissey (A)	*Worcester.*
Mabel Piper (A)	*Worcester.*
Anna Theresa Smith (A)	*Worcester.*
Mary Celia Smith (A) (Secretary)	*Worcester.*
Etta Melissa Thayer (A)	*Worcester.*
Alhambra, Cal.	
Etta Theresa Whalen (A)	*Worcester.*

THIRTEENTH CLASS, JUNE, 1883.

Ada Bartlett Braman	*Worcester.*
Mrs. Charles L. Tower, *Worcester.*	
Minnie Anna Burgess Chase	*Worcester.*
Mrs. Frank E. Whitehouse, *Worcester.*	
Louise Frances Clark (A)	*Paxton.*
Mary Louise Gafney (A)	*Worcester.*
Alphonsine Talon L'Esperance (A)	*Worcester.*
Died in St. Hyacinthe, Que., Jan. 1, 1887.	
Mary Frye Lewis	*Willimantic, Conn.*
Mary Agnes McGillicuddy	*Worcester.*

NAMES.	RESIDENCES.
Mary Alice Marshall *Manchester, N. H.*	*Still River.*
Jessie Moore Nichols	*Auburn.*
Jennie Mitchell Perrin Mrs. Frederick A. Richardson, *Worcester.*	*Westborough.*
Alice Valentine Phelps	*Worcester.*
Estella Virginia Rolston (A) (Secretary) *Honolulu, Hawaian Islands.*	*Worcester.*
Jennie Elizabeth Sanderson (A)	*Worcester.*
Mary Gertrude Smith (A)	*Quinsigamond.*
Agnes Rose Stewart (A)	*Worcester.*
Abbie Josephine Taft (A) *New York City.*	*Worcester.*
Lizzie Minnie Urban	*South Westminister.*
Octavia Howard Vaughan (A)	*Worcester.*
Hattie Louisa White	*Boylston Centre.*
Margaret Osgood Whitney Mrs. Frederick W. Blackmer, *Worcester.*	*Worcester.*
Grace Carpenter Williams (A) Mrs. Charles S. J. Ruggles, *Gardner.*	*Gardiner, Me.*

FOURTEENTH CLASS, JANUARY, 1884.

Mary Louise Blenus (A) Died in Millbury, Feb. 6, 1887.	*Worcester.*
Daniel Henry Casey	*Worcester.*
Ellen Gertrude Daley (A)	*Worcester.*
Adelia Teresa Gauren (A)	*Worcester.*
Eliza Tainter Gilbert (A) Mrs. George Day, *Worcester.*	*Worcester.*
Eudora Estella Hay (Secretary)	*Worcester.*
John Edward Lynch	*Worcester.*
Nellie Abbie Robbins (A) Mrs. Henry W. Sykes, *Sheffield.*	*Rochester, N. Y.*

FIFTEENTH CLASS, JUNE, 1884.

Maria Fernald Bosworth (A) (Secretary)	*Worcester.*
Maud Loetta Davis (A)	*Worcester.*
Ellen Frances Fallon	*Worcester.*
Margaret Frances Hagan	*Worcester.*
Lilla Ingalls Mrs. Albert D. Felch, *West Medford.*	*East Templeton.*

NAMES.	RESIDENCES.
Mary Jessie King	*Middleville, N. Y.*
Mrs. Frank H. Buxton, *Worcester.*	
Etta Rosella Leonard (A)	*Worcester.*
Mrs. Irving E. Comins, *Worcester.*	
Mary McCann (A)	*Leominster.*
New Britain, Conn.	
Anna Gertrude Melanefy (A)	*Worcester.*
Died in Worcester, Nov. 30, 1885.	
Annie Ward Newell (A)	*Millbury.*
Helena Bridget O'Keefe	*Worcester.*
Providence, R. I.	
Edith Marietta Rolston (A)	*Worcester.*
Mary Lucy Seavey (A)	*Worcester.*
Alice Alberta Tatman (A)	*Quinsigamond.*
Mrs. Arthur E. Hayer, *Quinsigamond.*	
Elizabeth Pickering Thompson	*Durham, N. H.*
Mrs. Albert DeMeritt, *Durham, N. H.*	
Katy Adaline Wilder	*Sterling.*
Mrs. R. Lincoln Chandler, *Sterling.*	

SIXTEENTH CLASS, JANUARY, 1885.

Katherine Blanche Adams	*Worcester.*
Mrs. Lester T. Crook, *Worcester.*	
Mary Louise Burroughs	*Boxborough.*
Minnie Jennie Condy (A)	*Worcester.*
Mrs. Charles F. Pharaoh, *Worcester.*	
Emma Florence Davis	*Shrewsbury.*
Mrs. George E. Stone, *Shrewsbury.*	
Cora Belle Drew	*Burlington, Vt.*
Anna Gertrude Foley (A)	*Worcester.*
Julia Elizabeth Green (A)	*Worcester.*
Lucy Maria Green (A) (Secretary)	*Worcester.*
Catharine Aloysia Hackett (A)	*Worcester.*
Annie Maria Ham (A)	*Worcester.*
Carrie Adaline Hildreth (A)	*Worcester.*
Mary Anne McBride (A)	*Worcester.*
Ellen Gertrude McGillicuddy (A)	*Worcester.*
Mary Agnes Morrissey (A)	*Worcester.*
Delia Isabel Newbury (A)	*Worcester.*
Mrs. Willis E. Knowlton, *Worcester.*	
Carrie Louise Paige (A)	*Hardwick.*

NAMES.	RESIDENCES.
Ida May Parsons (A)	*Holden.*
Frances May Prentice (A)	*Westborough.*
Hannah Sheehan (A)	*Whitinsville.*
Mary Elizabeth Talbot Tandy	*Athol.*
Ella Maria Wells (A)	*Deerfield.*
Alvena Betsy Williams (A) Mrs. George E. Stimson, *Leicester.*	*Paxton.*

SEVENTEENTH CLASS, JUNE, 1885.

Ida Florence Buxton	*Worcester.*
Cora Augusta Cooley (A) Mrs. Edward Lawton, *Ayer.*	*Worcester.*
Amy Holbrook Dana (A) *Atlanta, Ga.*	*West Boylston.*
Minnie Alberta Davis	*Worcester.*
Carrie Elizabeth Dodd (A)	*Paxton.*
Emily Sophia Gaskill (A)	*Mendon.*
Emma Jane Goddard (A)	*Grafton.*
Emma Eliza Hayward	*Ashby.*
Benjamin West Kinney (A) (Secretary)	*Worcester.*
Georgia Hudson Lakin (A) Mrs. Charles H. Dodd, *Worcester.*	*Paxton.*
Ada Elvera Mason	*Worcester.*
Agnes Josephine O'Gorman (A)	*Worcester.*
Carrie Melinda Sweetzer (A)	*Worcester.*
Florence Mabel Waite (A)	*Pittsfield.*

EIGHTEENTH CLASS, JANUARY, 1886.

Alice Lucina Bainbridge (A)	*Worcester.*
Alice Rosilla Barton (A)	*Upton.*
Grace Rebecca Everett (A) (Secretary)	*Worcester.*
Edith May Harding (A)	*Worcester.*
Sarah Wyman Hay (A)	*Worcester.*
Nellie Francene Monroe (A)	*Rutland.*
Julia Agnes Quinn (A)	*Worcester.*
Margaret Scott (A)	*Burlington, Vt.*
Annie Gertrude Thompson (A)	*Worcester.*
Carrie Alona Thompson (A)	*Worcester.*

NINETEENTH CLASS, JUNE, 1886.

NAMES.	RESIDENCES.
Cora Jane Ball (A)	*Grafton.*
Addie Taylor Banister	*Worcester.*
Clara Harwood Bemis	*Spencer.*
Julia Meeker DeCamp (A)	*Worcester.*
Mrs. Sanford D. Leland, *Holyoke.*	
Mary Jennie Hart (A)	*Worcester.*
Susan Rhoda Hartwell (A)	*Oxford.*
Thomas Joseph Higgins (A) (Secretary)	*Worcester.*
Mary Alice Johnson	*Westborough.*
Mary Elizabeth Joyce (A)	*Worcester.*
Carrie Lauretta Maynard (A)	*Worcester.*
Susan Augusta Peirce (A)	*West Boylston.*
Died in West Boylston, April 27, 1888.	
Abby Louise Penniman (A)	*Worcester.*
Hattie May Ruggles (A)	*Worcester.*
Annie Elisabeth Tucker (A)	*Chelsea.*
Melrose.	
Ella Maria Whitney	*Upton.*
Mrs. Allen D. Risteen, *Hartford, Conn.*	
Carrie Howard Wilmarth (A)	*Worcester.*

TWENTIETH CLASS, JANUARY, 1887.

Harriet Louise Brewster (A)	*Westborough.*
May Elsie Chapin	*Worcester.*
Caroline Gertrude Cooke (A)	*Worcester.*
Sarah Leighton Dinsmore	*Lowell.*
Sarah Elizabeth Earley (A)	*Spencer.*
Carrie Lincoln Fletcher (A)	*Worcester.*
Marion Holbrook (A)	*Worcester.*
Florence Holman (A)	*West Millbury.*
Marietta Knight	*Worcester.*
Elizabeth McFarland	*Sutton.*
Hattie Louise Partridge (A)	*Worcester.*
Cora Deborah Elizabeth Robinson (A)	*Worcester.*
Lilian Ainsworth Smith (A)	*Dudley.*
Florence Sherman Waite (A) (Secretary)	*Worcester.*

NAMES.	RESIDENCES.
Lizzie Helen Wallis (A)	*North Oxford.*
Margaret Louisa Walsh (A)	*Worcester.*
Henrietta Maria Wright (A)	*East Templeton.*

TWENTY-FIRST CLASS, JUNE, 1887.

Olive Minerva Barnes (A)	*Worcester.*
Alice Harriette Belding	*Worcester.*
Annie Josephine Butterfield (A)	*Worcester.*
Lulu Louise Clarke (A)	*Worcester.*
Albert Swain Colburn	*Shirley Village.*
Anna Burgess Collier (A)	*Worcester.*
Josephine Pauline Convery (A)	*Worcester.*
Margaret Mary Hanley (A)	*Worcester.*
Addie Maria Harthan (A)	*Worcester.*
Kate Maria Healy (A)	*Worcester.*
Nellie Gertrude Jerome (A)	*Worcester.*
Cora Emma Kemp (A)	*Worcester.*
Abbie Curtis Knight (A)	*Worcester.*
Emma Martha McCormick	*Spencer.*
Honora Lucy Murphy (A)	*Worcester.*
Mary Jane Newton (A)	*Greenfield.*
Abigail Loretta O'Hara (A)	*Worcester.*
Lucy Reed Poland (A) (Secretary)	*Worcester.*
Mary Teresa Power (A)	*Worcester.*
Miriam Frances Proctor (A)	*Spencer.*
May Caroline Rogers (A)	*Worcester.*
Kate Emogene Smith (A)	*Florence.*
Louise Adelia Stockdale (A)	*Worcester.*
Charlotte May Taylor (A)	*Bolton.*
Bertha Caroline Yeaton (A)	*Worcester.*

TWENTY-SECOND CLASS, JANUARY, 1888.

Jennie Ambrose Casey (A)	*Worcester.*
Margaret Anne Connolly (A)	*Worcester.*
Idaline Dawley (A)	*Plainfield, Conn.*
Died in Plainfield, Conn., Sept. 4, 1888.	
Catherine Teresa Donnelly (A)	*Worcester.*

NAMES.	RESIDENCES.
Annie Elizabeth Fales (A)	*Westborough.*
Ida Childs Gleason	*West Brookfield.*
Ida Etta Leland (A)	*Upton.*
Mary Mackin (A)	*Worcester.*
Fanny Richards Brewer Macomber (A)	*Worcester.*
Edith Maria Marsh	*Leicester.*
Mary Gertrude Overend (A) (Secretary)	*Worcester.*
Cora Almira Paige (A)	*Worcester.*
Dora Alvira Paige (A)	*Worcester.*
Julia Winifred Smith (A)	*Quinsigamond.*
Minnie Belle Stearns (A)	*North Leominster.*

TWENTY-THIRD CLASS, JUNE, 1888.

Mary Agnes Cunningham (A)	*Worcester.*
Amelia Louisa Diemar (A)	*Worcester.*
Minnie Isabel Gage (A)	*Worcester.*
Henry Dwight Hunt	*Columbia, Conn.*
Anna Miriam Johnson (A)	*Worcester.*
Edith Genevieve Loring	*Westborough.*
Jeannette Morrill (A)	*Benton, N. H.*
Gertrude Emma Nash (A)	*Worcester.*
Mary Alice O'Gready (A)	*Worcester.*
Annie Brown Porter (A)	*Manchester, N. H.*
Mary Agnes Quinn (A)	*Worcester.*
Flora Addy Strong	*Starksborough, Vt.*
Margaret Gertrude Sullivan (A)	*Worcester.*
Mary Louise Taylor (A) (Secretary)	*Worcester.*
Helen Frances Walker	*Worcester.*

TWENTY-FOURTH CLASS, JANUARY, 1889.

Martha Jennie Alton (A)	*Worcester.*
Harriet Amelia Blood (A)	*Worcester.*
Carrie Maria Bunce (A)	*Worcester.*
Anna Callahan	*Barre.*
Harriet Washburn Cook (A)	*Worcester.*

NAMES.	RESIDENCES.
Jennie Maria Fairbanks	*Holden.*
Ellen Estelle Fitzgerald (A)	*Worcester.*
Cecilia Theresa Kelley (A)	*Worcester.*
Sarah Ann McCormick (A)	*Worcester.*
Ellen Agnes McTiernan (A)	*Worcester.*
Alice Elizabeth Marsh	*Leicester.*
Katherine Mathews (A)	*Westborough.*
Grace Lamson Newton (A)	*Oakdale.*
Ellen Agnes O'Neil (A)	*Worcester.*
Mary Elizabeth Patten	*Danby, Vt.*
Alice Cressy Plumer (A)	*Maxwell, Neb.*
Grace Emeline Remington (A)	*Worcester.*
Sara Elizabeth Rollison (A)	*Worcester.*
Olive Russell (A) (Secretary)	*Worcester.*
Mary Ann Agnes Short (A)	*Worcester.*
Mary Alice Smith (A)	*Worcester.*
Dora Taft	*Mendon.*
Winifred Rosalie Todd (A)	*Worcester*
Addy Frances Yeaton (A)	*Worcester.*

SPECIAL STUDENTS

WHO HAVE RECEIVED CERTIFICATES OF PROFICIENCY.

1881.

Francis Patrick McKeon, A.M.
Richard Henry Mooney, A.M.

1882.

Thomas William Butler.
Owen Henry Conlin, A.B.
Peter Andrew Conlin, A.B.
Edward Aloysius Quinland, A.B.

1883.

Arthur Hay, A.B.

1886.

William Francis Carmody, A.B.

SUMMARY OF NUMBERS.

Number in the First Class	10
Number in the Second Class	17
Number in the Third Class	27
Number in the Fourth Class	14
Number in the Fifth Class	10
Number in the Sixth Class	12
Number in the Seventh Class	14
Number in the Eighth Class	20
Number in the Ninth Class	16
Number in the Tenth Class	17
Number in the Eleventh Class	14
Number in the Twelfth Class	10
Number in the Thirteenth Class	21
Number in the Fourteenth Class	8
Number in the Fifteenth Class	16
Number in the Sixteenth Class	22
Number in the Seventeenth Class	14
Number in the Eighteenth Class	10
Number in the Nineteenth Class	16
Number in the Twentieth Class	17
Number in the Twenty-first Class	25
Number in the Twenty-second Class	15
Number in the Twenty-third Class	15
Number in the Twenty-fourth Class	24
Total number of Graduates	384
Number of Certificated Students	8

GIFTS OF THE GRADUATING CLASSES.

These all form a part of the decoration of the main hall or school-room.

First Class	Apollo. (Bust.)
Second Class	Angel-Boys, from Raphael's "Sistine Madonna." (Photograph.)
Third Class	Guido's "Aurora." (Photograph.)
Fourth Class	Colosseum at Rome. (Photograph.)
Fifth Class	Julius Cæsar. (Bust.)
Sixth Class	John Locke. (Bust.)
Seventh Class	Pestalozzi. (Bust.)
Eighth Class	Ralph Waldo Emerson. (French's Bust.)
Ninth Class	"An Old Monarch," by Rosa Bonheur. (Engraving.)
Tenth Class	Pyramids and Sphinx. (Photograph.)
Eleventh Class	Titian's "Flora." (Photograph.)
Twelfth Class	Michel Angelo's "Three Fates." (Photograph.)
Thirteenth Class	Lincoln. (Volk's Bust.)
Fourteenth Class	Webster. (Photograph by Hawes.)
Fifteenth Class	Millet's "Spinner." (Etching.)
Sixteenth Class	Franklin. (Houdon's Bust.)

FOURTEENTH ANNIVERSARY,

STATE NORMAL SCHOOL

AT WORCESTER.

PROGRAMME.

THURSDAY, JUNE 21, 1888

FORENOON,

BEGINNING AT HALF-PAST NINE O'CLOCK.

SINGING, — Pleyel's Hymn, "To Thy Pastures Fair and Large." (Learnt by ear.)

Arranged by Mr. C. C. Stearns.

Reading of the Theses.

TWENTY-SECOND CLASS, JANUARY, 1888.

JENNIE AMBROSE CASEY (A), ... Worcester.

A FEW CHARACTERISTICS OF THE GERMAN SCHOOLS.

MARGARET ANNE CONNOLLY (A), ... Worcester.

SCHOOL HYGIENE, DR. D. F. LINCOLN.

IDALINE DAWLEY (A), ... Plainfield, Conn.

THE EDUCATION OF THE CHINESE.

*CATHERINE TERESA DONNELLY (A), ... Worcester.

A ROMANCE OF EDUCATION, — RICHTER'S "LEVANA."

*ANNIE ELIZABETH FALES (A), ... Westborough.

SOME CHARACTERISTICS OF BOYHOOD.

*IDA CHILDS GLEASON, ... North Brookfield.

CHILDREN'S MAKE-BELIEVES.

*IDA ETTA LELAND (A), ... Upton.

THE SAVAGERY OF CHILDHOOD.

NOTE. — Not all the essays can be read in the time allotted to the exercises. The names of the readers are indicated by a star.

N. B. — Graduates whose names are marked with (A) have, besides passing through the regular course of study, served for a half-year as apprentices in the public schools of the city of Worcester.

*Mary Mackin (A), ... Worcester.

Tree-Planting at the Normal School.

*Fanny Richards Brewer Macomber (A), . . . Worcester.

The Teaching of Writing in the Public Schools.

*Edith Maria Marsh, ... Leicester.

Treatment of Children by Adults.

*Mary Gertrude Overend (A), ... Worcester.

The School: Monarchy or Republic?

Cora Almira Paige (A), ... Worcester.

Explanation of Terms in Reading.

*Dora Alvira Paige (A), ... Worcester.

Furniture and Arrangement of the School-Room.

Julia Winifred Smith (A), ... Quinsigamond.

Some of Locke's Views on Education.

Minnie Belle Stearns (A), ... North Leominster.

School Decorations.

RECESS, — FIVE MINUTES.

Singing, — "The Night her veil is throwing," . . . *Rossini.*

TWENTY-THIRD CLASS, JUNE, 1888.

*Mary Agnes Cunningham (A), ... Worcester.

The Normal School Grounds.

Amelia Louisa Diemar (A), ... Worcester.

School Economy.

*Minnie Isabel Gage (A), ... Worcester.

Helen Keller.

*Henry Dwight Hunt, ... Columbia, Conn.

Physical Science in the Common School.

Anna Miriam Johnson (A), ... Worcester.

"The Physical Basis of Brain-Work."

Edith Genevieve Loring, ... Westborough.

The Ambition of Children.

*Jeannette Morrill (A), ... Benton, N. H.

"Sound-Blindness."

*Gertrude Emma Nash (A), ... Worcester.

Diagrams Illustrative of Statistics.

Mary Alice O'Gready (A), ... Worcester.

Influence of Children upon One Another.

Annie Brown Porter (A), ... Manchester, N. H.

Some Disadvantages of the Inductive Method of Teaching.

Mary Agnes Quinn (A), ... Worcester.

Rosmini's "Ruling Principle of Method."

*Flora Addy Strong, ... Starksborough, Vt.

Children's Motives.

*Margaret Gertrude Sullivan (A), ... Worcester.

The Child Prodigy.

*Mary Louise Taylor (A), ... Worcester.

Tolstoi's School at Fairfield.

*Helen Frances Walker, ... Worcester.

Education in Alaska.

AFTERNOON,

BEGINNING AT QUARTER-PAST TWO O'CLOCK.

SINGING, — "Fatherland, Fatherland!" . . . . *Franz Abt.*

VALEDICTORY, — TWENTY-SECOND CLASS.

IDALINE DAWLEY (A), ... Plainfield, Conn.

THE EDUCATION OF THE CHINESE.

VALEDICTORY, — TWENTY-THIRD CLASS.

ANNIE BROWN PORTER (A), ... Manchester, N. H.

SOME DISADVANTAGES OF THE INDUCTIVE METHOD OF TEACHING.

Award of Diplomas.

SINGING, — Three old English Songs (learnt by ear and sung in unison):

1. "The Hunt is up!" (Chappell, 1667.)
2. "Ned that Died at Sea." (Dibdin.)
3. "With Jockey to the Fair." (Chappell.)

ANNIVERSARY ADDRESS.

By JOHN FISKE, of Cambridge.

Subject, — "THE ROMAN IDEA AND THE ENGLISH IDEA OF NATION-MAKING."

SINGING, — The Parting Hour. "Still let our voices," . . . . *Bellini.*

LAST REPORT OF THE STATE BOARD OF VISITORS CONCERNING THE WORCESTER SCHOOL.

[*From the Fifty-second Annual Report of the Board of Education.*]

The statistics presented as part of this report show that the Worcester school is accomplishing its proper work. The harmonious spirit in which this work is done can only be observed by those who are familiar with the daily exercises of the classes, or who watch the conduct of the graduates as they carry into the public schools of the Commonwealth, as a result of their training, the skill and enthusiasm which it is the express mission of the normal school to impart. There is less and less question, year by year, that the course of training afforded by our normal schools results in better and better teachers.

The steadily increasing demand for our graduates goes to prove this. They are sought for not only by cities and large villages where they have long been preferred, but also more and more by rural towns and in remote districts. It is unquestionable that they are gradually superseding untrained teachers, even those of experience, and at higher wages.

The normal type is recognized as the best, and amateur teachers try, by private study and by visiting schools taught by normal graduates, to approach this type as nearly as possible in their teaching. This is what might be expected. It is impossible, in the nature of things, that young people with the profession of teaching in view should spend two or three diligent years in preparation for their chosen calling, under experienced instructors, without substantial benefit.

There is, of course, no such thing as making good teachers out of inferior men and women; but, given persons of native intelligence and sense, it should go without saying that they can be taught to know and practise the principles of the art of teaching, as well as of any other art. Nor does this imply that teaching has attained the perfection of a science and can dispense with experiments. Such a notion belittles the process of education, and at the same time exaggerates the mastery of it that even the wisest and most skilful educators have as yet attained. The proper

attitude of the teacher, young or old, towards his art, is, and will long continue to be, one of intelligent, experimental study, and it is in this attitude that the normal school should aim to place its students.

THE ENTERING CLASSES.

The two classes admitted during the present year have had a longer and better preparation than any heretofore admitted to the school. A considerable number have already taught school successfully, and of the September class more than sixty per cent. are graduates of high schools. This is a gratifying fact, and gives good promise for the future.

When suitable and adequate preparation for the normal school shall have come to be the rule, instead of the exception, with those who apply for admission, our students will not only derive greater advantage from their course here, but will take still higher rank as graduates and teachers.

It may be added, however, that the attainments of the graduates of our normal schools are believed to be in general fully up to what the community demands, or is willing to pay for. As evidence of this, it has repeatedly been our experience that students, whom we have felt compelled to dismiss for lack of ability and promise, have not failed to find employment as teachers.

GRADUATES.

Our last public anniversary was an occasion of much interest. The theses presented by the graduating classes were all upon subjects strictly professional, some of them based upon original observations, and all showing a degree of care, zeal and intelligence in the preparation that reflected high credit upon the writers.

Among the visitors of prominence who honored the occasion with their presence was Dr. Joshua G. Fitch of England, one of Her Majesty's inspectors of schools, who kindly spoke some timely and encouraging words to the graduates.

Professor John Fiske of Cambridge delivered the anniversary address, a philosophical and eloquent exposition of "The Roman Idea and the English Idea of Nation-making."

It is a fact of some significance that every member of the graduating classes had passed with approbation the public examination of teachers by the school committee of Worcester, before receiving the normal school diploma.

TEACHERS.

The teaching staff remains the same as for some years past, with the addition of a new member, Miss Arabella H. Tucker of North Brookfield.

Miss Tucker was a member of the first class that graduated from this school, that of 1876, and has been a successful teacher and diligent student since that time. She is in full accord with the aims and methods of the school, and her character and attainments, as well as her skill as an instructor, give promise of much usefulness in the position to which she has been called. She is at present in charge of the department of botany, a subject to which she has for years given special attention.

The other teachers continue the zealous and faithful service which has given to the school the high character and reputation it has so long enjoyed.

PLUMBING AND DRAINAGE.

The plumbing of the school building was put in fifteen years ago, and was fairly well up to the standard of that time. Since then, however, radical changes of method have been made, and many of the arrangements and devices considered satisfactory a few years ago are no longer approved, or even tolerated in first-class buildings.

There is also a somewhat uneasy and suspicious state of public feeling with reference to the whole matter, which cannot wisely be disregarded.

It was therefore thought best that the entire work should be thoroughly gone over again, and made to conform, in principle and workmanship, to the strictest standards of the present day. This has accordingly been done, under the personal supervision of Mr. Charles H. Baldwin of this city, a plumber of high repute; and we are confident that we have now in operation as perfect a system of plumbing as any public or private building can show. The cost of the work was about seven hundred and fifty dollars ($750).

The question of sewerage has been permanently settled by connecting the drain pipe with the city sewer, a work which has proved to be of considerable magnitude and cost, owing to the rocky character of the ground.

THE GROUNDS.

It is with great gratification that the visitors report that the extensive and picturesque grounds on which the school building stands are, at length, suitably inclosed.

A wall of solid masonry, capped with rough-hewn granite of a brilliant color, now gives the finish and protection that the lot has long needed, and two ample gateways afford easy and natural access from the north-east and the south-west.

Teachers and students, with new pride and courage, have resumed their work of beautifying the rugged paths and groves with trees, shrubs and vines; and it is safe to say that within a few years no State institution will be able to show more tasteful or attractive surroundings than the Normal School at Worcester.

ACKNOWLEDGMENTS.

We are much indebted to Professor Fiske, as above intimated, for his very able anniversary address.

We also tender our thanks, not for the first time, to Edward Winslow Lincoln, Esq., for timely suggestions and contributions toward the improvement of our grounds.

Benjamin F. Dodge, Esq., has kindly presented the school with a copy of the history of the town of Sutton.

STATISTICS.

NOTE. — The statistics of this school have heretofore covered the calendar year (that being the fiscal year for State institutions) instead of the academic year; that is, the time from September to July, during which the school is in session.

For greater simplicity and convenience, a change is now made, whereby the statistics which follow relate only to what is commonly called the "school year;" namely, in the present report, from September, 1887, to July, 1888.

1. Numbers: —

Number of pupils in the first term	173
Number of pupils in the second term	165
Whole number of pupils in attendance during the school year 1887–1888,	198

2. Numbers in entering classes: —

In September, 1887	49
In February, 1888	19
Total	68

3. Average age of pupils admitted: —

In September, 1887	18 years 5 months.
In February, 1888	18 years 4 months.

4. Of those admitted there were: —

From Worcester County	62
From Connecticut	2
From Kentucky	1
From New York	1
From Vermont	2
Total	68

5. Occupations of pupils' parents: —

Professional	2
Mercantile	11
Skilled labor	24
Unskilled labor	28
Unknown	3
Total	68

6. Numbers in graduating classes: —

In January	15
In June	15
Total	30

7. Average age of graduates: —

In January	21 years 4 months.
In June	20 years 7 months.

Of the above graduates, *nearly all* are already (Nov. 1, 1888) engaged in teaching.

8. The library: —

Number of text books added	230 volumes.
Number of reference books added	126 volumes.
Total additions	356 volumes.
Whole number of text books now in library	4,850 volumes.
Whole number of reference books now in library	2,340 volumes.
Total	7,190 volumes.

E B. STODDARD,
A. P. STONE,
Visitors.

QUESTIONS USED AT THE ENTRANCE EXAMINATION (WRITTEN PART), JAN. 31 AND FEB. 1, 1889.

The questions are printed merely to indicate, in a general way, to those who may be preparing to enter the school, something of the standard required for admission.

School committees, teachers and others may receive copies of the examination questions regularly by applying to the Principal.

ARITHMETIC.

All the figuring must be handed in. Decimals are to be carried three places and no more.

1. Subtract 807 from 1806, and explain the work fully.

2. A fox is 150 rds. ahead of a hound. The dog runs at the rate of 42 rds. a minute and the fox at 30 rds. a minute. In how many minutes will the hound overtake the fox?

3. Tell how you find the *time*, when the *principal*, *rate* and *interest* are given.

4. What is the length of a festoon that reaches diagonally across the ceiling of a room 32 ft. long and 24 ft. wide, 6 ft. being allowed for the drooping of the festoon?

5. Mr. Henry Bent buys goods of George P. Souther, and a receipted bill is given. Whose name is signed to it? Who keeps it? What is it for?

6. A town is to raise $3,971 by taxation. The taxable property is valued at $700,000, and there are 471 polls each taxed $1.00. What is the tax on $1,000?

7. Define *bond*, *prime number*, *rectangle*.

8. A farmer hired a man to cut and haul wood; the man was to receive 20% of the wood cut for his services. He delivered 320 cords. How much did he cut?

9. 18 men worked 28 days a month for 2 months, and during that time built a wall 40 ft. long, 16 ft. high and 3 ft. thick. A similar wall, 360 ft. long, 10 ft. high and 8 ft. thick, was built in 3 months, the men working 24 days each month. How many men were employed?

GRAMMAR.

So toilsome was the road to trace,
The guide, abating of his pace,
Led slowly through the pass's jaws,
And asked Fitz-James by what strange cause
He sought these wilds traversed by few
Without a pass from Roderick Dhu.

1. Write each clause separately, and state:
   (*a*) Whether it is independent or dependent.
   (*b*) What is its grammatical use in the sentence.
2. Parse "toilsome, road, to trace, abating."
3. Write the principal parts of the verb, "led;" also the progressive form of the same mode and tense as "led."
4. Write the present and past principles of "trace."
5. Write the subjunctive, present, third, singular, of the verb "sought."
6. Parse "wilds, what, few."
7. What kind of prepositional phrase is "of his pace?"
8. What three parts of speech may connect clauses?
9. Write sentences containing the word "fast" used as
   (*a*) a noun:
   (*b*) an adjective:
   (*c*) a verb:
   (*d*) an adverb:

GEOGRAPHY.

1. On the outline map which will be furnished you,
   (*a*) Draw with dotted lines the boundaries of the different countries or states.
   (*b*) Write the names of the countries or states.
   (*c*) Write the names of the principal cities.

2. A ship sails from New York to Japan, and returns by a different route. Name in order the waters passed through, the winds and currents encountered, and the ports seen.

3. Name eight leading imports of the United States, and the city from which each is shipped.

4. Choose one :
   (*a*) What are icebergs, and how are they formed?
   (*b*) What are oases, and what causes them?
   (*c*) What are monsoons, and what causes them?

5. Choose one :
   (*a*) Estimate the latitude and longitude of a place directly opposite Worcester, on the other side of the globe, and tell about where it is situated.
   (*b*) What is the width of each zone?

6. Choose one, and describe briefly :
   (*a*) Argentine Republic.
   (*b*) England.
   (*c*) India.

7. Choose one and describe briefly :
   (*a*) The government of any country in Europe.
   (*b*) The religion of any country in Asia.

8. Choose three, and give some reason for their rapid growth :

(*a*) St. Paul. (*b*) Minneapolis.
(*c*) St. Louis. (*d*) Chicago.
(*e*) Buffalo. (*f*) Atlanta.
(*g*) San Francisco. (*h*) Jersey City.

9. Name three leading railroads of the United States, and the cities which each connects.

UNITED STATES HISTORY.

1. Bound the original territory of the United States, and name the states that it embraced.

2. In what ways has the territory been increased?

3. When was Boston founded? Independence declared? The first president inaugurated? The Pacific coast settled? Slavery abolished?

4. Tell what you know about the Boston Port Bill.

5. Write (briefly) anything that the following names suggest: Adams, Franklin, Cornwallis, Lee, Sherman, Trenton, Fort Sumter, Vicksburg, The Alabama, Appomattox Court House.

6. Name any historical works (not school text-books) that you have read.

SPELLING.

1. equilateral
2. disappointed
3. preceding
4. arranging
5. ornamental
6. acquainted
7. infinitive
8. independent
9. evanescent
10. absence
11. indicative
12. politician
13. relative
14. *Mabel* found the
15. *Principal*
16. too
17. *irascible* to teach
18. *grammar*
19. *successfully*
20. raisins
21. superintendent
22. repetition
23. elliptical
24. subtrahend
25. eightieth
26. indigenous
27. commemorate
28. calendar
29. which
30. vertical

GIFTS.

From the Fifteenth Class of Graduates, a handsome etching, by Le Couteux, of Millet's "Spinner," beautifully framed by Knoedler of New York.

From the Sixteenth Class of Graduates, an excellent copy in plaster, by Bernardini of New York, of Houdon's noble bust of Franklin.

From Hon. Hamilton B. Staples, a photograph of a cast or squeeze of an antique brass memorial tablet in the Church of All-Hallows, Barking, London.

From Benjamin J. Dodge, Esq., a copy of the History of Sutton, Mass.

From Miss Rebecca Jones, forty botanical dissecting needles.

From E. A. Hubbard, Esq., two copies of his excellent Monograph on Computing Interest.

From Henry W. Brown, Esq., a copy of his translation, in two volumes, of Preyer's "Mind of the Child." Also a copy of "Conscious Motherhood," by Miss Marwedel.

From Dr. H. M. Quinby, flowering plants in great abundance for the grounds.

From Miss Ruth A. Haskell, seeds of the *Sequoia gigantea*.

From Miss Juliet Porter, a copy of Darwin's "Power of Movement in Plants."

From Francis A. Gaskill, Esq., his Civic and Political History of Worcester.

From Rev. Henry T. Cheever, his "Correspondence of Faith and Views of Madame Guyon."

From Mrs. Elizabeth Thompson, a copy of "The High-Caste Hindu Woman."

From Miss Helen F. Marsh, a handsome specimen of amethyst crystals from Lake Superior.

From several members of the Fourth Class of undergraduates, the national ensign of Japan.

From Mr. George Coult, a confirmed benefactor of the school in this department, a large collection of interesting botanical specimens, mostly from Dakota.

From Mr. Will C. Coult, Harrison, South Dakota, a share in the last-mentioned donation; also a large number of valuable bird skins (more than twenty species) from the West. Most of these have been stuffed and mounted, and are now in the museum.

ANNIVERSARY ADDRESSES.

Have been given by the following persons:—

In 1877, by William T. Harris, LL.D., of St. Louis.

In 1878, by Rev. Thomas Hill, D.D., of Portland, Me.

In 1879, by Alexander H. Rice, LL.D., of Boston.

In 1880, by Mrs. Julia Ward Howe of Boston.

In 1881, by Rev. Francis Tiffany of West Newton.

In 1882, by Hon. James W. Patterson, LL.D., of Hanover, N. H.

In 1883, by Mrs. Ednah D. Cheney of Boston.

In 1884, by Prof. G. Stanley Hall, Ph.D., of Baltimore.

In 1885, by Prof. Albert Harkness, LL.D., of Providence, R. I.

In 1886, by Charles Dudley Warner of Hartford, Conn.

In 1887, by Edward S. Morse, Ph.D., of Salem.

In 1888, by John Fiske of Cambridge.